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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/366,299	08/02/1999	SEOK-JIN HAM	678-318(P882	2887

7590 05/07/2004

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EXAMINER

NGUYEN, TU X

ART UNIT PAPER NUMBER

2684

DATE MAILED: 05/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/366,299

Applicant(s)

HAM, SEOK-JIN

Examiner

Tu X Nguyen

Art Unit

2684

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 25 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-5, 8-26 is/are pending in the application.
- 4a) Of the above claim(s) 6 and 7 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 11-16, 21 and 22 is/are allowed.
- 6) ☒ Claim(s) 1-5, 8-10, 17-20, 23-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 16.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## DETAILED ACTION

### Response to Arguments

1. Applicant's arguments, filed 2/25/04, with respect to claims 1, 8 and 23-24, have been considered but are moot in view of the new ground(s) of rejection.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-3, 8-10, 19-20 and 22-26, are rejected under 35 U.S.C. 102(b) as being anticipated by Wittstein et al. (US Patent 5,631,947).

Regarding claims 1, and 23-24, Wittstein et al. disclose a method of billing service in an electronic switch in a cellular network, comprising the steps of:

setting a time when service initiation request or a service resumption request is generated as a service start time and initiating a call (see col.2 lines 15-16, col.4 lines 1-2 and col.18 lines 50. "call detail record" is included "setting a time when service initiation request" for a user to review the program to compute charges for the use of telephone);

setting a service suspension request time as a service end time upon generation of a service suspension request by the system during the service and suspending the

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service (see 96 fig.4, col.5 lines 19-24 and col.18 line 50 through col.19 line 5, "drop calls" reads on "service suspension request by the system", and "a minute of drop call" which includes "start time and end time of service suspension");

sending billing data including (see col.4 lines 49-57) the service start time and the service end time in the service suspended state, and determining whether a service resumption request is generated; and ending the service when a service termination request is generated in the service suspended state (see col.2 lines 15-16, 96 fig.4, col.5 lines 19-24. "call detail record" is included "setting a time when service initiation request" for a user to review the program to compute charges for the use of telephone).

Regarding claims 8, Wittstein et al. disclose everything as claim 1 above. More specifically, Wittsten et al. disclose calculating and accumulating service suspended periods (see col.5 lines 19-24, and col.4 lines 1-2. "drop calls" and "programmed to compute charges" read on "calculating and accumulating service suspended periods")

Regarding claims 2-3, Wittstein et al. discloses the service initiation request is generated when an outgoing call, an incoming call is answered (see col.18 lines 50-67, the call charge is base on call connection. Therefore, the call charge is occurred only when there is connection of both end users).

Regarding claims 9-10, 19-20 and 25-26, Wittstein et al. disclose everything as claim 1 above. Wittstein et al. disclose the service suspended period is the difference between a service suspension start time and service suspension end time (see 96 fig.4, col.5 lines 19-24 and col.18 line 50 through col.19 line 5, "drop calls" reads on "service

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suspension request by the system”, and “a drop call” which includes “start time and end time of service suspension”).

As to claim 22, Wittstein et al. disclose the billing data further includes the number of service suspension occurrences (see col.5 lines 19-25, “drop calls” reads on “number of occurrences”).

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 4-5, and 17-18, are rejected under 35 U.S.C. 103(a) as being unpatentable over Wittstein et al. in view of Smolik (US Patent 6,381,455).

Regarding claims 4-5 and 17-18, Wittstein et al. fails to disclose the service suspension signal is sent by the BSC to notify that a frames are not normally transmitted or a frame transmission resumes.

Smolik discloses the service suspension signal is sent by the BSC to notify that frames are not normally transmitted or a frame transmission resumes (see col.8 lines 17-26). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Wittstein et al. with the above teaching of Smolik in order to detecting unexpected call drop.

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***Allowable Subject Matter***

6. Claims 11-16 and 21-22 allowable.
7. The following is an examiner's statement of reasons for allowance:

Regarding claim 16, none of prior art teaching "setting a service resumption request time as a service suspension end time upon request for service resumption in the service suspended state, calculating the service suspended time from the service suspension start time and the service suspension end time" and "setting a service termination request time as a service end time upon request for service termination in the service suspended state, calculating a service suspended time from the service suspension start time and the service end time" as cited in the claim.

Regarding claims 11 and 21, none of prior art teaching "designating an unique index upon request for service suspension during a service" as cited in the claims.

***Conclusion***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tu Nguyen whose telephone number is (703) 305-3427. The examiner can normally be reached on Monday through Friday from 8:30 a.m. to 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, MAUNG NAY A, can be reached at (703) 308-7749.

Any inquiry of a general nature or relating to the status of this application should be directed to the Technology Center 2600 Customer Service Office at (703) 306-0377.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

**or faxed to:**

(703) 872-9314 (Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

TW  
3/30/04

  
**NAY MAUNG**  
**SUPERVISORY PATENT EXAMINER**